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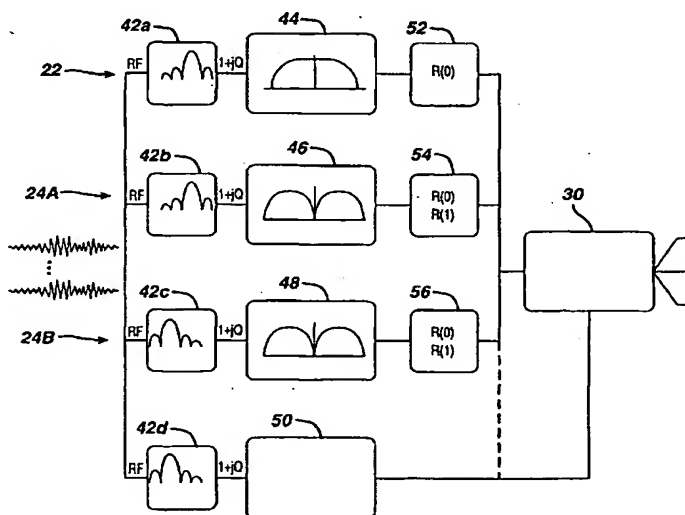
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(54) Title: **ULTRASONIC IMAGING OF PERFUSION AND BLOOD FLOW WITH HARMONIC CONTRAST AGENTS**



(57) Abstract: An ultrasonic diagnostic imaging method and system produce diagnostic contrast images depicting both tissue perfusion and flow velocity in larger vessels by utilizing both linear and nonlinear imaging techniques. A sequence of echoes from differently modulated transmit pulses is received and processed in different ways to detect nonlinear signals from microbubble-perfused tissue and Doppler blood flow in larger vessels. The Doppler flow signals may be either linear or nonlinear or a mixture of both. A decision circuit classifies the detected signals for display pixels in a perfusion and/or flow and/or tissue image. Separate perfusion and flow images can be simultaneously displayed or an image of both perfusion and flow can be displayed.

**Declaration under Rule 4.17:**

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM,

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